Computers Live On In Colombian Classrooms

Students at San Rafael School in Junín, Cundinamarca, Colombia, are introduced to their first computer. (Photo courtesy of CPE)

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Young technicians in white coats stand at a workbench where they carefully put a bank of a dozen computers through a series of tests. The setting could be a high-tech business anywhere in the industrialized world. In fact it's in Colombia and the technicians are students from a technical college working at one of the country's five refurnishing centres. The computers they are working on are part of a unique "recycling" project that is putting computers into thousands of classrooms across the country.

What the students are doing is refurbishing computers that have been donated by businesses all over Colombia to be used in the *Computadores para Educar* (CPE) program. It is a critical step in a program that in just three years has provided almost 20 000 computers to more than 2000 schools and libraries in the country. CPE is based on the highly successful Computers for Schools program in Canada, and was established with the help of Industry Canada. But there are some major differences between the Canadian and Colombian programs as they have evolved.

Gaining valuable experience

The biggest difference, according to Carlos Muñante, of the Institute for Connectivity in the Americas (ICA), based at the International Development Research Centre (IDRC), is that the Canadian model is primarily a refurbishing model. In Canada many children have access to computers outside of school. In Colombia this is simply not the case, says Muñante. A case study of the implementation of the CPE was recently completed with ICA support. In Colombia they have adapted a program from the North, but it has undergone a process you could call 'tropicalization' in order for it to work in the South."

That process includes refurbishing, of course. There are five refurbishing centres in cities around the country, the largest in Bogota. To keep costs to a minimum — currently about US$60 per computer — students in the SENA (*Servicio Nacional de Aprendizaje*, Colombia's national technical education program) must spend one entire semester working on the donated computers. The continuous flow of used computers provides the students with valuable work experience. And it works — only 3.6% of the refurbished machines have been found to have problems.

Before the computers can be installed in a school, site preparations must be made to ensure that there is security, that a reliable power supply is available and in place, and that there are suitable locations for the computers and other equipment, such as printers. And while this is being done, teachers must be trained both in the operation of the computers and in the use of the computer as an educational tool. University students provide teacher training. In addition, one person from each school is trained to be that school's "computer specialist."

Keys to success

Availability of software in Spanish is not an issue, says Muñante. Microsoft donates Spanish versions of its Windows operating system and Office applications suite, and there is a wealth of educational material freely available on the Internet.

Of course, before any of this can happen, there must be computers. There is a continuous and growing flow of late model used machines to the CPE from both private and public businesses. More than 600 businesses — three-quarters of them in the private sector — have contributed to the program. And local chambers of commerce have provided assistance as well as offering space for storing and refurbishing the donated equipment.

The key to the success of the program in so short a time is political will, according to Muñante. The initiative came right from the Presidency, from the office of the First Lady. So it was clear that the political will was there, and that is what drives the program.

Providing incentives

There was also a major publicity program in the mass media to promote the idea. And there are incentives that make it easy for companies to contribute. Donors not only receive a tax credit for every piece they provide, they are also eligible for a discount when they purchase new computers from the manufacturers.

This combination of volunteer effort and incentives makes the CPE both effective and economical, says Muñante. The annual budget for the program from the government is just $4.5 million, which is a fraction of the real cost to provide computers to 2 000 schools. Last year the program was audited to ensure that it was being run effectively and that there were no irregularities. The program passed the audit with flying colours.

Overcoming difficulties

However, no program on this scale can be without its share of problems. Some of the issues the CPE is still grappling with in some schools include networking difficulties, availability of a reliable power supply, and lack of access to the Internet. The Internet is simply not universally available yet in Colombian towns and cities. In some cases the teachers have Internet access at home and are able to download materials, which they can then make available to the class.

Muñante notes that there is a continuous process of monitoring and evaluation to identify shortcomings in the program and to determine ways to improve it. And the flow of computers into the program will continue as older machines become obsolete or wear out.

Three years is too short a time to measure the benefits the students gain from having access to computers in the classroom, but for some 750 000 young Colombians the experience is already making school a whole lot more exciting.

That excitement has spread beyond Colombia's borders, as other countries in the region view the overall success of the program. Ecuador is now in contact with the Colombian CPE team to discuss knowledge transfer and program implementation in that country. And ICA, in collaboration with Industry Canada, which started it all, is planning a regional event in Argentina to promote the Colombian model.

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For more information:

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